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Simulation is another item in the teacher's bag of instructional tools. It is essentially a motivational device and must not be confused with role-playing. In simulation the individual plays himself in a situation, whereas in role-playing he performs what he interprets to be the demands of the role. There are many criticisms of the use of simulations and games, the most common being that they may distort reality, and that they may simulat e experiences which society demands that the individual shall keep away from in real life. An all-embracing answer that is offered against these criticisms is that they do not apply if the games and simulations are designed with skill and with good sense. Included in this report is a section entitled "Design Your Own" which tabulates the steps necessary in the design of a game. Included also is the agenda for the consortium which took place on May 27-28, 1968 at Madonna College, Michigan. A participation list and some of the games and simulations used, as well as a bibliography, are provided. (CO)

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an approach to meaning through participation

Games & Simulation

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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IDEAS IN MOTION

Games and Simulations:

An Approach to Meaning through Participation

Leonard S. Demak
Leo Dworkin

May 1969

Consortium of Advanced Educational Thinking
Leo Dworkin, Coordinator

Wayne County Intermediate School District
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Introduction

A program on games and simulations, jointly sponsored by Wayne County's Consortium of Advanced Educational Thinking, Project REMIDY, ASSIST and Madonna College in May of 1968, focused on

1. Helping educators gain increasing understanding of the implications of games and simulations for education.

2. Exploration of the theory and conceptual framework of games and simulations.

3. Opportunities to experience the meaning of games and simulations.

4. Participation in the development of promising practices and ideas for the improvement of education.

Why An Interest in Games and Simulations?

Improving the process of education is an unfinished business. There is much yet to be accomplished. Some young people tell us that "education turns us off," that school bears little relationship to reality—that the process and content are not "relevant."

Our schools continue to bear responsibilities for the healthy development of individuals and for the ways individuals play their roles in our society. For as long as our schools have these functions, educators must continue the search for the processes to help education come alive for all our youth.

There is increasing evidence that one of the most promising practices capable of "turning on" youth is the concept of games and simulations. They can help educators engage the interests of youth and help with the continuing problem of motivation.

In game-playing, groups of students encounter conceptual learning within realistic problem-solving situations. Games are scored according to realistic criteria. Many users of games have reported improved student motivation and involvement; more relaxed atmospheres in classrooms; and, increased skills in decision-making, communication and influence-resisting.

In commenting on simulation games, James S. Coleman has said the game, "allows a boy or girl to act through situations before he faces them in real life, to see indirect and long-range consequences of choices he may make before it is too late and he must face consequences in real life."

Simulation shows the essence of what might happen in real life. It can be used to:

- present information
- elicit responses or provide a situation for practice
- assess performance

Simulations, while they do not contain all of reality, contain the most important parts of it. They also provide opportunities for improved total student involvement in learning. The affective and cognitive dimensions of learning are not treated separately, so children can get more totally involved.

In some ways, simulations may seem to be sophisticated versions of case study techniques. They are certainly related to role-playing. However, there is an important distinction. In simulation the individual plays himself in a situation. In role-playing, the person is supposed to do what he thinks the role dictates.

Users and creators of simulations need to be alert to a number of criticisms of their use. Some children may be asked, in effect, to

simulate an experience that the general society virtually precludes them from experiencing in real life. In an excellent pamphlet *Simulation Games for the Social Studies Classroom* published by the Foreign Policy Association, other limitations of games have been identified. It has been claimed that games may tend to "dehumanize students by allowing them to maneuver the lives of others without, at the same time, subjecting them to a system of constraints similar to that which exists in the real world."

Others wonder about the impact on children of playing games where the measure of success is the amount of money or political power gained through game strategies. The view of reality in some games has been criticized as distorted and that "naive misconceptions" are developed. However, most criticisms can be negated by good game design and wise use.

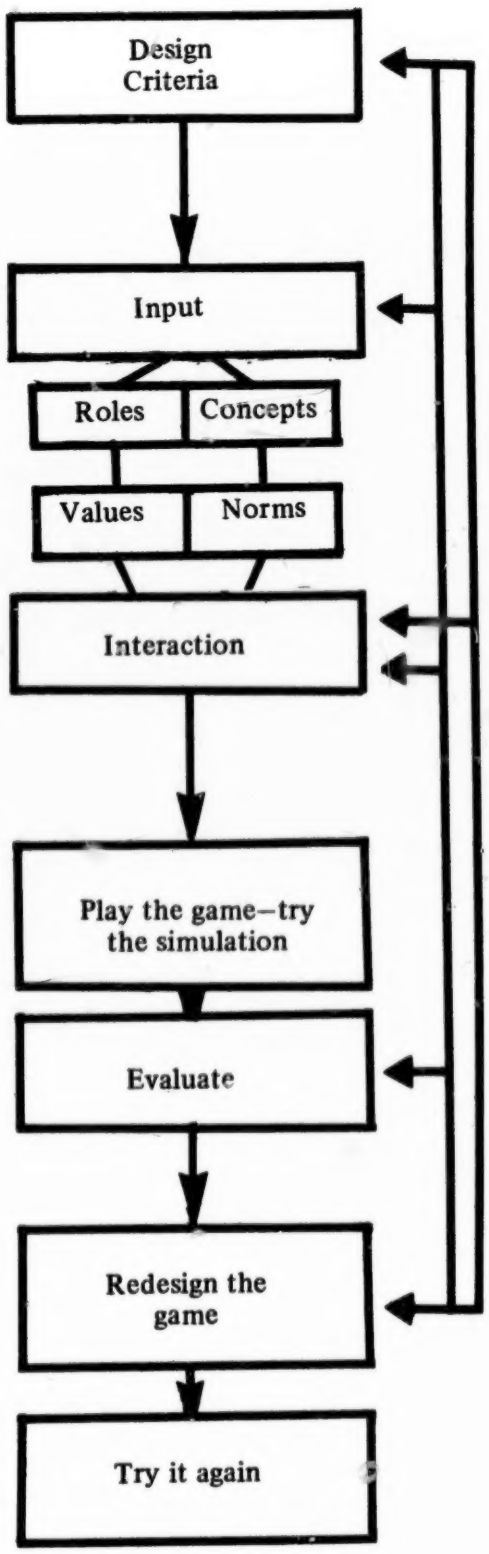
Although not enough games are available now, more and more are being developed commercially. However, educators are encouraged to develop their own games and simulations. The process of developing them can be as exciting and as productive as playing the game itself.

For the teacher who is looking for techniques which will help him move away from complete domination of the classroom, games and simulations are very useful. They call for new roles for students and teachers.

It is not proposed that these techniques take over for all of the other important tools in the educator's bag. It is suggested that games and simulations are an important motivational device that have their place with other methods.

It is suggested that only after playing—or even better—designing games, does one get an appreciation of the power and potential inherent in the use of games and simulations.

DESIGN YOUR OWN



What do you want to simulate? State goals and objectives.

What is really important to give reality to the simulation? What is involved? Persons, ideas, things, processes?

What is to be done—by whom—and when? What are the rules? What are the actions? What happens as consequences of actions?

Carefully note what happens.

Assess what happens according to the design criteria, input and interactions.

Develop new design criteria, applications and interactions. Study the evaluation.

CONSORTIUM NO. 5
GAMES AND SIMULATION:

An Approach to Meaning Through Participation

May 27-28, 1968

Madonna College – 36600 Schoolcraft, Livonia, Michigan

Wayne County Intermediate School District
Co-sponsored by the:
- Consortium of Advanced Educational Thinking
- Project REMIDY
- Project ASSIST
- and Madonna College

Focus: Practice and Theory

Coffee and registration
Sister Mary Martinez, Madonna College

Introduction and Orientation
Leo Dworkin, Consortium Coordinator, Wayne County Intermediate School District

Games and Simulation: An Approach to Meaning Through Participation
Resource persons: Audrey Suhr, Field Director, Carnegie Project for Study of Social Organization of Schools, John Hopkins University; Linda Elbow, Field Representative, Apt Associates, Inc.

Reflections and Reactions
Dr. E. J. McClendon, Consultant, Wayne County Intermediate School District

Simulation and Non-Simulation: A Demonstration and Comparison
Resource person: Dr. Layman Allen, Law School, University of Michigan

Discussion and Questions
Sam Mangione, Director, ASSIST Center, Wayne County Intermediate School District

Reality, Creativity and Participation: "The Tuned in Dimensions"
Resource persons: Dr. Cleo Cherryholmes, Assistant Professor, Political Science, Michigan State University; Mr. Stephen Bornstein, Associate Director, Apt Associates, Inc.

An Experience in the Design of Games
Resource Persons: Dr. Cherryholmes and Mr. Bornstein

Group Reports and Reactions
Sister Mary Martinez

Focus: Theory

Games and Simulation: The Status of the Field

1. What do we now know?
2. What are the implications for education?
3. What do we need to know?

Resource person: Dr. Everett Rogers, Professor of Communications, Director,Diffusion Center, Michigan State University

Questions and Discussion
Dr. Leonard Demak, Director of REMIDY

Conversations on the Cutting Edge
Panel: Bornstein, Rogers, Cherryholmes, Allen, Suhr, Elbow. "Can Games and Simulation play a role in involving people in moving toward the solution of social problems?"

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Some Games and Simulations

Source or Game Designer	Title	Description
Interact P.O. Box 262 Lakeside, California 92040	Panic	Divided into economic pressure groups of 1920-1940 in different regions of the United States, students have their grades directly influenced by their ability and by fate (that is, the Great Depression). Students study the prosperity of the 1920's and the depression of the 1930's. The simulation culminates in mock Congressional committees have a mock Congress trying to solve the economic crisis. For in 1929 earlier in the game, students have lost from 0 to 100% of their wealth when the stock market crashed.
	Division	Divided into four factions supporting Lincoln, Douglas, Breckinridge, and Bell, students study 14 issues dividing Americans during the 1850's: extension of slavery into the terriorites; the Dredd Scott Decision; the protective tariff; the perpetuity of the Union, etc. The simulation culminates in two days when factions pressure, bargain, block one another during the last six "weeks" of the election of 1860.
	Disunia	Divided into 13 states on a new planet in 2087, students struggle with problems Americans became entangled in during the period of the Articles of Confederation, 1781-1789. The simulation culminates in a constitutional convention students see the necessity of calling while they

		represent their states Nova Yuk= New York; Soah Coah = South Carolina, Vespa = Virginia, etc.
	Sunshine	Students are "born" by pulling race identity tags from a hat at the beginning of the simulation. During the remainder of the game, students wear their identities (tags which are either white, tan, brown, or black and which show education, job, income, and street address). The classroom is divided into Sunshine, a mythical city with six neighborhoods with varying degrees of segration and integration in housing and schooling. While studying the history of the Negro from slavery to the present, students also research ways of solving current racial problems. Pressure cards force students to propose solutions to their city council, elected from fellow class members.
Academic Games Associates, Center for Study of Social Organization of Schools, Johns Hopkins University Baltimore, Maryland 21218	Consumer	A model of the consumer buying process involving players in the problems and economics of installment buying; consumers compete to maximize their utility points for specific purchases while minimizing their credit charges; the three different credit agents also compete to make the most satisfactory lending transactions.
	Democracy (Legislature)	A composite of eight different games which simulate the legislative process; in the basic version players act as representatives, giving speeches and bargaining with other players. The object is to pass those issues which are most important to their constituents and thereby get re-elected. For quantities over 20 copies,

	order from: National 4-H Foundation, 7100 Connecticut Avenue, N.W. Washington, D.C. 20015.
Economic System	A simulation of the interrelationship of a competitive economic system. Mine owners, manufacturers, workers and farmers market, produce and consume goods while trying to make a profit and maintain a high standard of living.
Life Career	A simulation of certain features of the "labor market," the "education market" and the "marriage market," as they now operate in the U.S. and as projections indicate they will operate in the future; the players work with a profile of a fictitious person, alloting his time and activities among school, studying, a job, family responsibilities and leisure time.
Community Response (Disaster,	A simulation of a community hit by a localized natural disaster, each player tries to dispel his anxiety for family members who may be within the stricken area, while at the same time tries to operate his community post which is vital to the community's well-functioning and eventual overcoming of the disaster.
Parent-Child	Simulates the relationship between a parent and an adolescent in respect to five issues differentially important to both; parents compete against parents and children compete against children to develop the best strategies in their relationships.

Abt Associates Inc. 55 Wheeler Street Cambridge, Massachusetts 02138	Pollution	Designed to teach elementary school students about economic, technological, and political aspects of air and water pollution control. The first part of the game is a brief simulation of the generation of water and air pollution. The students, acting as residents of a New England town, product goods and find that they thereby produce pollution. Both air and water pollution are physically represented on a gameboard. As the yearly cycles of production proceed, pollution is seen to affect the economy. The players are motivated to control pollution. The second phase of the game is a simulation of a town meeting in which the players meet to decide on a method of controlling pollution. They are given a list of technological alternatives and costs. Polution was designed for the Curriculum Development Center of the Wellseley School System of Wellesley, Massachusetts.
	Elementary School Social Studies	A fourth grade social studies course with a strong emphasis on games and three dimensional materials is being developed for the Learning Center, and affiliate of Creative Playthings, Inc. The course uses anthropological content to illustrate five social concept areas: family, technology, life cycle, resources, and political organization. Five pre-industrial societies around the world are presented, each an example of a type of pre-industrial economy.
	Kolkhoz	A game about the collective farm economy in the Soviet Union. Students role play the Kolkhoz manager, peasant families, and the State

	banker/representative of the Gosplan. Developed for the Board of Cooperative Educational Services (BOCES), Northern Westchester County, and sponsored by the Innovation Program of the New York State Education Department. For information contact BOCES, 845 Fox Meadow Road, Yorktown Heights, New York 10598.
Seal Hunting	Designed by Abt Associates Inc. and adapted by the Education Development Center. A social studies board game in which children experiment with hunting and sharing strategies with an unpredictable food supply. Children play Eskimos and seals on opposite sides of the ice.
Hunting Caribou	Designed by Abt Associates Inc. and adapted by the Education Development Center. A social studies board game in which children explore the relationship of technology and social organization in a culture using the example of caribou hunting among the Netsilik Eskimos of Pelly Bay.
Empire	A board game for junior high school students, EMPIRE was designed by Abt Associates Inc. and revised by the Education Development Center. Illustrates mercantile competition between American colonies and England in the 1730's. Seven teams of players, such as London merchants, colonial farmers, and British West Indies planters, bargain over prices, buy and sell goods, and move ships across the Atlantic. For information, contact the Education Development Center, Cambridge, Mass.

Potlatch Game	Illustrates an important institution in the social and economic life of the Kwakiutl Indians of the Pacific Northwest. The game is part of the unit "Studying Societies" developed for the ninth and tenth grade by the Anthropology Curriculum Study Project of the American Anthropological Association. For information, contact Dr. Malcolm Collier, Director of the Project, 5632 Kimbark Avenue, Chicago, Illinois.
Raid	Designed to teach disadvantaged groups of students the problems and possible solutions to the crime problems of the city. Players are divided among a police team, with resources of men and weapons, a racketeer team, with resources of men and weapons, and teams representing city blocks, with resources of men and money. The police team attempts to catch the racketeers; the racketeers attempt to extort money and recruit men from the city blocks, and the city blocks seek to maintain or increase wealth and population.
Grand Strategy	A game of international relations and diplomacy in a crisis wartime situation. The time period covers five years from 1914 to 1918, and players represent European nations. Their objective is to achieve their nation's political aim at minimum military and economic costs. Nations form alliances and move army divisions and ships on an outline of the European continent. Although there is some historical secrecy, the outcome need not be the same as in 1918.

Science Research Associates 259 East Erie Street Chicago, Illinois 60611	Inter-Nation Simulation	This is a simulation of international relations, including the interrelationship of domestic and foreign policy.
		These five "Decision Making Exercises" have been written to supplement social science courses relating to American government. They were written by Leonard Stitleman and William D. Coplin.
		The Constitutional Convention: A Decision Making Exercise
		Presidential Campaigning: A Decision Making Exercise
		The Federal Budget and Interest Groups: A Decision Making Exercise
		The Congressman At Work: A Decision Making Exercise
		Congressional Committees: A Decision Making Exercise
High School Geography Project P.O. Box 1095 Boulder, Colorado 80302	Farming	An agricultural investment game staged in three different periods of U.S. history.
	Metfab	Simulates some factors involved in locating a factory. A part of a provisional unit on "Manufacturing."
	Section	Simulates conflicts of interest in a political area.
Project Simile Western Behavioral Sciences Institute 1121 Torrey Pines Road LaJolla, California 92037	Crisis	A simulation of an international crisis over a mining area of vast importance.
	Napoli	A simulation of the legislative process and its interrelationship with parties.
	Plans	In this simulation, interest groups try to use influence and produce change in American society.

Washington Center for
Metropolitan Studies
1717 Massachusetts Avenue, N.W.
Washington, D. C. 20036

Urban Systems Simulations organized to apply gaming techniques to urban problems. Region incorporates economic, social, and political relationships.

Preceding listing of games adapted from

Simulation Game for Social Studies Classroom. 1968, Foreign Policy Association.

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SIMULATION
(Operational Gaming)

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SIMULATION
(Operational Gaming)

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Sociol Ed 30: 521-2 N '66	War or peace: a simulating game.
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Sociol Ed 31: 51-3 Ja '67	Teachers, computers, and games: innovations in the social studies.
Sociol Ed 30: 421-2 O '66	Labor vs management: a simulation game.
Sociol of Ed 39: 215-36 Sum '66	Games with simulated environments in learning.
Social Studies 58: 25-9 Ja '67	Use of games as a teaching technique.
Times Ed Sup 2687: 1214 N 18 '66	Preparation for a headship.
Times Ed Sup 2642: 36 Ja 7 '66	War game: Dept. of international politics at the University college of Aberystwyth.
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A V Instr 12:691-2 S '67	Map-match: a game that really swings
Bal Sheet 49:251-2 F '68	Myth of key punch simulation
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El Sch J 68:39-43 O '67	Simulating problems of beginning teachers

Grade Teach 85: 27+ Ja '68	It worked for me
Grade Teach 85: 118-20 Mr '68	Reading: games children play
Instr 77: 31 Ja '68	Air travel game
Instr 77: 89+ D '67	Games for the new math
Instr 77: 41+ O '67	Games that teach
Instr 77: 172-3 Ag '67	Social studies games: new learning tool
Instr 77: 107+ Mr '68	Reading games
Instr 77:90 Mr '68	Techniques for FL E S
Instr 77: 73 D '67	What it's like when children play a computer game
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J Ap Psychol 51: 426-31 O '67	Some effects in business gaming of previous quasi-group affiliations
Mont Ed 44:40-2 F '68	Modern mass media: games in the classroom
Nat Assn Sec Sch Prin Bul 52:62-72 F '68	Academic games and learning
Nat Assn Sec Sch Prin Bul 52:88-98 Ja '68	Decision-making approach to guidance
Nat Assn Sec Sch Prin Bul 51:22-30 D '67	Political game for history students
Nat Assn Sec Sch Prin Bul 52:114-19 F '68	Simulating leadership in vocational education. Madison Township simulated materials
Personnel & Guid J 46:328-34 D '67	Life career game
P T A Mag 62: 20-3 33 Ja '68	War talk and war games
Sch Activities 39:10-15 F '68	Seedbed for leadership

Sch Activities 39:16-21 F '68	Teaching world politics through model United Nations organizations
Sch & Soc 96:184-5 Mr 16 '68	Academic games in the classroom
Sch & Soc 96: 43-4 Ja 29 '68	Games theory in education
Sch & Soc 96: 184-5 Mr '68	Academic games in the classroom
Sch & Soc 96: 43-4 Ja 29 '68	Games theory in education
Sch & Soc 96: 184-5 Mr '68	Learning potential in games
Sch R 75:378-91 Wint '67	Simulated environments in higher education
Sch Safety 3:28-9 N '67	Rocky-road, safety game
Social Studies 59:119-22 Mr '68	Mock legislature
Social Studies 59:116-119 Mr '68	Social science teaching with internation simulation

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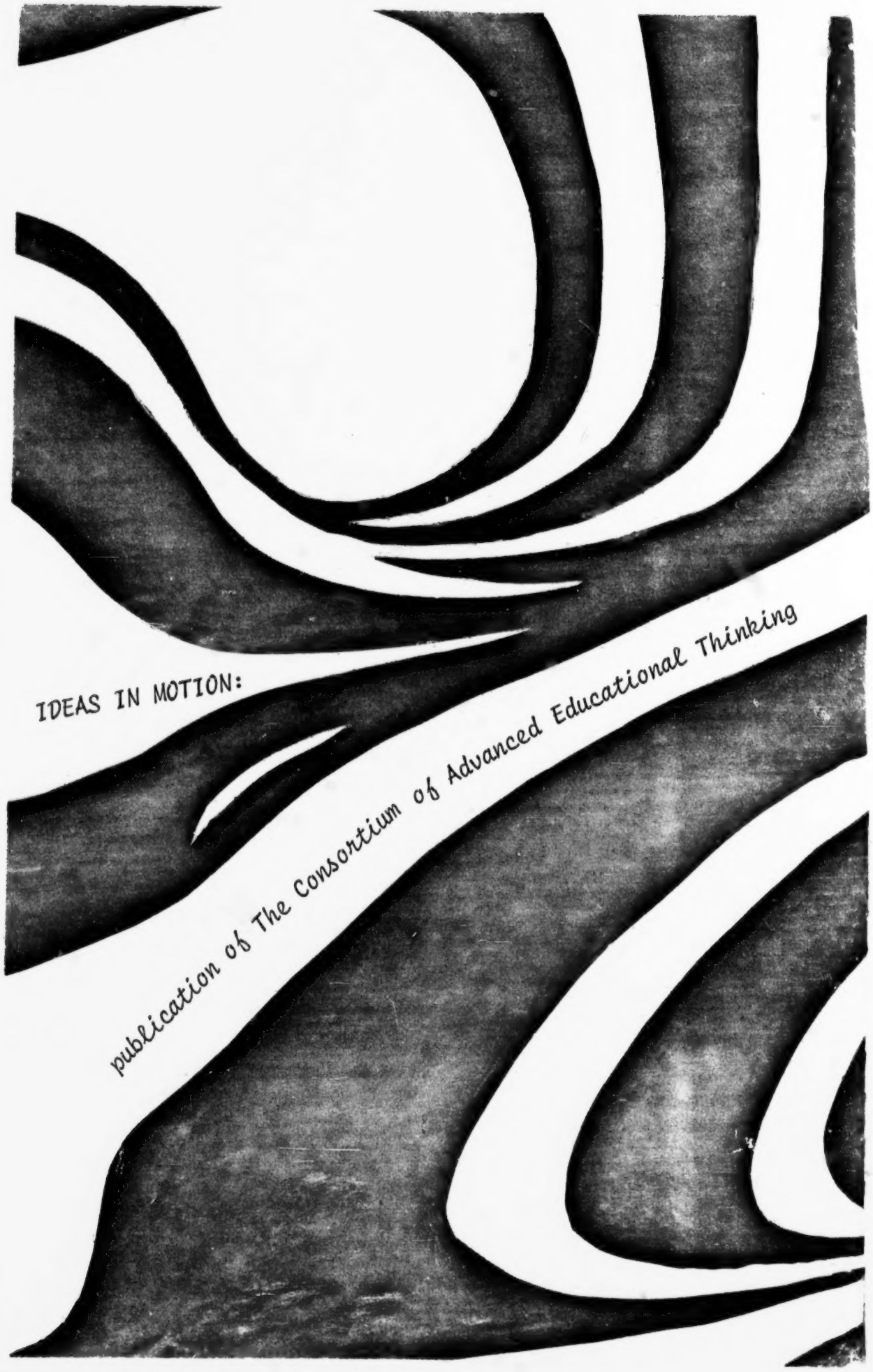
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